IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants:	Bernardo A. Huberman et al.	§	Confirmation No.:	4497
Serial No.:	10/695,198	§	Group Art Unit:	2437
Filed:	10/28/2003	§	Examiner:	Shewaye Gelagay
For:	Encoded Attribute Matching On Communication Devices	§	Docket No.:	200313922-1

APPEAL BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Date: April 20, 2009

Sir:

Appellants hereby submit this Appeal Brief in connection with the above-identified application. A Notice of Appeal was electronically filed on February 19, 2009.

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I. REAL PARTY IN INTEREST

The real party in interest is Hewlett-Packard Development Company, L.P. (HPDC), a Texas Limited Partnership, having its principal place of business in Houston, Texas. HPDC is a wholly-owned affiliate of Hewlett-Packard Company (HPC). The Assignment from the inventors to HPDC was recorded on October 28, 2003, at Reel/Frame 014648/0485.

II. RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

III. STATUS OF THE CLAIMS

Originally filed claims:	1-27.
Claim cancellations:	7 and 26.
Added claims:	28 and 29.
Presently pending claims:	1-6, 8-25 and 27-29.
Presently appealed claims:	1-6, 8-25 and 27-29.

IV. STATUS OF THE AMENDMENTS

An amendment was filed on January 26, 2009, in response to the Final Office Action dated November 26, 2008. The amendment was entered as noted in an Advisory Action dated February 17, 2009.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

The instant application is directed to a technique for enabling communication device users to meet other users with similar interests, characteristics, etc. when they are in close proximity to each other. The technique generally includes the devices comparing attributes and alerting the device users when matches are found. Various permutations of the comparison process and user-notification process are disclosed and claimed.

Independent claim 1 is directed to a method usable on a first communication device 100A adapted to communicate with a second communication device 100B. Figs. 1 and 3, steps 302 and 304; p. 6, ll. 3-4. The method comprises obtaining a first key; encoding an attribute in the first communication device with the first key to produce a first encoded value; and transmitting the first encoded value to the second communication device. Fig. 3, steps 310 and 316; p. 6, l. 26 – p. 7, l. 16. The method also comprises receiving a second encoded value from the second communication device, with the second encoded value comprising an attribute stored in the second communication device that has been encoded with a second key associated with the second communication device. Fig. 3, steps 314 and 318; p. 6, l. 26 – p. 7, l. 16.

Still referring to claim 1, the method further comprises encoding the second encoded value with the first key to produce a third encoded value and transmitting the third encoded value to the second communication device. Fig. 3, step 320; p. 7, l. 23 – p. 8, l. 5. The method still further comprises receiving a fourth encoded value from the second communication device, with the fourth encoded value comprising the first encoded value after being encoded by the second key. Fig. 3, step 322; p. 7, l. 23 – p. 8, l. 5. If the third encoded value matches the fourth encoded value, the method comprises adjusting a total number of matches. Fig. 3, steps 324 and 326; p. 8, ll. 18-32. The method still further comprises enabling users of the first and second communication devices to physically locate one another only if said total number of matches meets or exceeds a threshold. P. 11, ll. 6-20. The first and second communication devices comprise mobile communication devices. Figs. 1 and 2; Fig. 3, step 302.

Dependent claim 8 comprises the limitations of independent claim 1, and is further directed to enabling the communication device users to physically locate one another comprises providing identical images on the first and second communication devices. P. 9, l. 26 – p. 10, l. 9.

Dependent claim 9 comprises the limitations of independent claim 1, and is further directed to enabling the communication device users to physically locate one another comprises emitting matching audible sounds via the first and second communication devices. P. 10, ll. 8-9.

Independent claim 11 is directed to a communication device 100 that comprises a processor 108 and memory 110 accessible to the processor and containing an attribute 112 and software 116 executable on the processor. Fig. 1; p. 3, ll. 11-25. The device also comprises a communication interface 102 coupled to the processor and adapted to permit the communication device to communicate with at least one other external device. *Id.* By executing the software, the processor determines whether the communication device's attribute matches an attribute stored in an external device, without receiving the attributes from the external device, based on a first encoded value received via the local communication interface from the external device. Fig. 3; p. 6, l. 1 – p. 9, l. 25. The first encoded value is indicative of an attribute stored in the external device. Fig. 3, steps 316 and 318; p. 8, ll. 6-17. If the communication device's attribute matches the attribute stored in the external device, the communication device adjusts a number of matches. Fig. 3, steps 324 and 326; p. 8, ll. 18-32. If the number of matches does not meet or exceed a threshold, the communication device refrains from disclosing a physical location of a user of the external device to a user of the communication device, unless a predetermined attribute of the communication device matches another attribute of the external device. P. 11, ll. 6-20. The communication device comprises a mobile communication device. Figs. 1 and 2; p. 3, ll. 16-20.

Dependent claim 19 comprises the limitations of independent claim 11, and is further directed to an antenna 114 coupled to the processor, where the communication device is adapted to allow users of the communication and

external devices to speak with one another via a service provider network 115. Figs. 1 and 2; p. 3, l. 13; p. 4, ll. 12-15.

Dependent claim 22 comprises the limitations of claims 11 and 21 and is further directed to the implementation of Bluetooth on the communication interface. P. 4, ll. 5-21.

Dependent claim 23 comprises the limitations of claim 11 and is further directed to the communication device's attribute comprising an attribute selected from the group comprising contacts, phone numbers, keywords, interests, appointments and favorite restaurants. P. 3, ll. 11-25.

Independent claim 24 is directed to a system that comprises a first communication device 100A having a first plurality of attributes 112A and a first key and a second communication device 100B having a second plurality of attributes 112B and a second key, where the second communication device is adapted to communicate with the first communication device. Fig. 2; p. 5, ll. 11-31. The first communication device encrypts each of the first plurality of attributes with a first key to form a first plurality of encrypted values and the second communication device encrypts each of the second plurality of attributes with a second key to form a second plurality of encrypted values. Fig. 3, steps 316 and 318; p. 8, ll. 6-17. The first communication device transmits each first encrypted value to the second communication device and the second communication device transmits each second encrypted value to the first communication device. *Id.* The first communication device encrypts each second encrypted value with the first key to produce a third plurality of encrypted values, and the second communication device encrypts each first encrypted value with the second key to produce a fourth plurality of encrypted values. Fig. 3, steps 320 and 322; p. 7, l. 23 – p. 8, l. 5.

Still referring to claim 24, the first communication device transmits each third encrypted value to the second communication device, and the second communication device transmits each fourth encrypted value to the first communication device. *Id.* If one of the first or second communication devices determines that any third encoded value matches any fourth encoded value, said

one of the first or second communication devices enables a user of that communication device to physically locate a user of the other communication device. Fig. 3, steps 324, 326, 328, 330 and 332; p. 9, l. 1 – p. 10, l. 28. The first communication device comprises a mobile communication device. Figs. 1 and 2; p. 3, ll. 16-20. The first communication device is capable of designating a subset of the first plurality of attributes as information that may always, occasionally or never be revealed to the second communication device. P. 11, ll. 4-6.

Dependent claim 25 comprises the limitations of claim 24 and is further directed to the implementation of a discovery mode in each of the first and second communication devices, where each communication device monitors for the presence of another communication device. P. 4, ll. 22-26.

Dependent claim 28 comprises the limitations of claim 1, and is further directed to emitting an audible ring tone indicative of said total number of matches. P. 10, ll. 19-23.

Dependent claim 29 comprises the limitations of claim 24, and is further directed to, if the first communication device is physically separated from the second communication device by a predetermined distance, the first communication device generating a message indicative of said separation. P. 11, l. 29 – p. 12, l. 4.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether claims 11-23 comply with the written description requirement under 35 U.S.C. § 112, first paragraph.

Whether claims 11-23 particularly point out and distinctly claim the subject matter which Appellants regard as the invention under 35 U.S.C. § 112, second paragraph.

Whether claim 11 includes all essential elements under 35 U.S.C. § 112, second paragraph.

Whether claims 1-6, 10-18, 20-21, 24 and 27 are patentable over Huberman et al., *Enhancing Privacy and Trust in Electronic Communities* (hereinafter "Huberman") in view of Drutman et al. (U.S. Pat. No. 6,618,593, hereinafter "Drutman") under 35 U.S.C. § 103(a).

Whether claims 22-23 and 25 are patentable over Huberman in view of Drutman and Yeager et al. (U.S. Pub. No. 2004/0133640, hereinafter "Yeager") under 35 U.S.C. § 103(a).

Whether claims 8, 9, 19 and 28 are patentable over Huberman in view of Drutman and further in view of Zacks et al. (U.S. Pub. No. 2004/0192383, hereinafter "Zacks") under 35 U.S.C. § 103(a).

Whether claim 29 is patentable over Huberman in view of Drutman and further in view of Doub et al. (U.S. Pat. No. 6,594,762, hereinafter "Doub") under 35 U.S.C. § 103(a).

VII. ARGUMENT

A. Claims 11-23 Comply With the Written Description Requirement.

Claims 11-23 stand rejected as allegedly failing to comply with the written description requirement of 35 U.S.C. § 112, first paragraph. Appellants respectfully traverse this rejection. Claim 11 is representative of this group of claims. The grouping should not be construed to mean the patentability of any of the claims may be determined in later actions (*e.g.*, actions before a court) based on the groupings. Rather, the presumption of 35 U.S.C. § 282 shall apply to each of these claims individually.

Claim 11 requires "wherein, if the number of matches does not meet or exceed a threshold, the communication device refrains from disclosing a physical location of a user of the external device to a user of the communication device, unless a predetermined attribute of the communication device matches another attribute of the external device." The Examiner alleges that the specification fails to support this limitation.

Appellants respectfully disagree and refer the Board at least to the specification, p. 11, ll. 2-20, which provides explicit and implicit support for the limitation in question. The limitation first requires "if the number of matches does not meet or exceed a threshold, the communication device refrains from disclosing a physical location of a user of the external device to a user of the communication device..." This limitation is supported at least by p. 11, ll. 6-14. These lines teach that a user can specify a threshold. If the threshold is not met, the first user is not notified of any matches. This teaching – that the first user is not notified of any matches – implicitly and logically supports the concept of the communication device refraining from disclosing a physical location of a user, as claimed, because the failure to notify a user of any matches inherently includes the failure to disclose a physical location of a user. Stated in another way, physical location cannot be conveyed unless a match is conveyed, so if a match is not conveyed, then physical location cannot be conveyed. Thus, the specification supports this first portion of the limitation.

The second portion of the limitation then provides for an exception to the first portion of the limitation: "unless a predetermined attribute of the communication device matches another attribute of the external device." The specification at p. 11, ll. 14-20 supports this second portion of the limitation. Specifically, this portion of the specification teaches that if a particular attribute (*e.g.*, designated by the user) finds a match, the threshold requirement may be overridden. Thus, the specification supports the second portion of the limitation.

Based on the foregoing, Appellants respectfully request that the rejection of the claims in this grouping be reversed and that the claims in this grouping be set for issue.

B. Claims 11-23 Contain Sufficient Antecedent Basis for the Term "Communication Device's Attribute."

Claim 11 (and, thus, dependent claims 12-23) stand rejected as allegedly lacking proper antecedent basis for the term "communication device's attribute" in violation of 35 U.S.C. § 112, second paragraph. Appellants respectfully traverse this rejection. Claim 11 is representative of this group of claims. The grouping should not be construed to mean the patentability of any of the claims may be determined in later actions (*e.g.*, actions before a court) based on the groupings. Rather, the presumption of 35 U.S.C. § 282 shall apply to each of these claims individually.

Claim 11, line 9 requires a "communication device's attribute." The Examiner argues that claim 11 contains no antecedent basis for this term. Appellants respectfully disagree. Claim 11 requires "an attribute" on line 3. Claim 11 itself is directed to "a communication device," as reflected in the claim's preamble. Therefore, the "attribute" on line 3 obviously belongs to the "communication device" mentioned in the preamble. Stated in another way, the "attribute" on line 3 is the communication device's attribute. Thus, the preamble and line 3 together provide sufficient and proper antecedent basis for the "communication device's attribute" on line 9.

Based on the foregoing, Appellants respectfully request that the rejections against the claims in this grouping be reversed and that the claims in this grouping be set for issue.

C. Claim 11 Contains All Essential Elements.

Claim 11 requires ". . . based on a first encoded value received via the local communication interface from the external device." The Examiner argues that claim 11 omits essential claim elements so as to amount to a gap between the elements. Specifically, the Examiner asserts that claim 11 "does not show any step of 'receiving a first encoded value from the external device.'" Office Action, p. 4, para. 9.

Appellants respectfully ask the Board to consider the unreasonableness of the Examiner's request. First, claim 11 is not a method claim. Thus, it would be improper to include any "step of receiving," as the Examiner suggests. Moreover, the claim already makes abundantly clear that the "first encoded value" is "received . . . from the external device." Adding a "step of receiving," as the Examiner suggests, would lend no additional clarity or information beyond that already offered by the current claim language. Thus, as the claim currently stands, no essential claim element is omitted.

Appellants respectfully suggest to the Board that the Examiner may be hindering prosecution and delaying allowance of the claims by making such unnecessary rejections. Based on the foregoing, Appellants kindly ask the Board to reverse this rejection.

D. Summary of Relevant Art.

1. Huberman

Huberman is directed to techniques for enabling communication devices to determine similarities between their respective preferences. Abstract. Huberman is also directed to techniques for discovering communities with shared values or preferences. *Id.* Huberman adopts known techniques from the cryptographic literature to enable these capabilities. *Id.* These cryptographic techniques, which facilitate the discovery techniques described above, are explained in detail in Huberman, Appendix A.

2. Zacks

The relevant portion (paragraph [0050]) of Zacks is directed to forms of communication between communication devices. Paragraph [0050]. Zacks explains that devices may communicate with each other using "video still picture, text messaging, audio and/or icon or symbolic messaging." *Id.* Zacks then provides numerous examples of such communication forms. *See id.* For example, files of recorded data, like video files and text files, may be exchanged.

3. Doub

The relevant portion (col. 3, ll. 43-61) of Doub is directed to signaling between two devices. Col. 3, ll. 43-61. Doub teaches that a transmitter 220 sends a transmit signal to a remote device 110. Col. 3, ll. 45-46. In turn, the remote device 110 determines whether the transmitter 220 and the electronic device 100 (which contains the remote device 110) are within a transmit range of each other. Col. 3, ll. 46-49. If they are within transmit range, the remote device 110 sends a reply signal to the transmitter 220, ostensibly acknowledging receipt of the transmit signal. Col. 3, ll. 52-55. If they are not within a transmit range, no reply signal is sent. Col. 3, ll. 55-58.

E. The Examiner Erred in Rejecting Claims 1-6, 10-18, 20-21, 24 and 27 Using the Combination of Huberman and Drutman.

1. Claims 1-6, 10-18 and 20-21

Claims 1-6, 10-18 and 20-21 stand rejected as allegedly obvious in view of Huberman and Drutman. Appellants respectfully traverse this rejection. Claim 1 is representative of this group of claims. The grouping should not be construed to mean the patentability of any of the claims may be determined in later actions (*e.g.*, actions before a court) based on the groupings. Rather, the presumption of 35 U.S.C. § 282 shall apply to each of these claims individually.

Claim 1 requires "if the third encoded value matches the fourth encoded value, adjusting a total number of matches" and "enabling users of the first and second communication devices to physically locate one another only if said total number of matches meets or exceeds a threshold." The combination of Huberman and Drutman fails to teach or suggest these limitations.

The Examiner asserts that Huberman discloses these limitations under the "Private Preference Matching" subtitle in the "Community Discovery" section and the "Cryptographic Details and Private Preference Matching" section on page 85. Appellants disagree. While the combination of Huberman and Drutman may allow for compatibility testing, it does not appear to allow users to physically locate each other **if and only if** the necessary condition of passing a threshold has been met. Stated in another way, claim 1 requires that it be necessary that a threshold be passed before two users may physically locate each other; Huberman has no such stringent restriction and may allow user contact even if the threshold has not been passed.

As just one example, Huberman may permit inter-user contact if matching keys are detected (as disclosed in the "Community Discovery" portion of Huberman, section 3), which means that the Huberman combination does **not** teach that two parties are able to physically locate each other **if and only if** a threshold has been met, as required by claim 1. Drutman fails to satisfy Huberman's deficiencies.

Appellants note that, in the Final Office Action dated May 15, 2008, the Examiner made the same assertion as in the present Final Office Action – that Huberman teaches the limitations in question. Appellants filed an Appeal Brief on September 29, 2008, explaining why Huberman fails to teach these limitations. The Examiner withdrew the Final Office Action of May 15, 2008 and re-opened prosecution. However, in the present Final Office Action, the Examiner has again asserted that Huberman teaches these limitations, and has cited Drutman for other claim limitations. Thus, it appears to Appellants that the Examiner has not even properly addressed Appellants' arguments in the Appeal Brief of Sept. 29, 2008 with respect to these limitations and Huberman. For this reason, it again appears to Appellants that the Examiner is unnecessarily delaying prosecution and allowance of the claims.

Based on the foregoing, Appellants respectfully ask the Board to reverse the rejections against this grouping of claims and set all claims in this grouping for issue.

2. Claims 24 and 27

Claims 24 and 27 stand rejected as allegedly obvious in view of Huberman and Drutman. Appellants respectfully traverse this rejection. Claim 24 is representative of this group of claims. The grouping should not be construed to mean the patentability of any of the claims may be determined in later actions (*e.g.*, actions before a court) based on the groupings. Rather, the presumption of 35 U.S.C. § 282 shall apply to each of these claims individually.

Claim 24 requires "wherein the first communication device designates a subset of the first plurality of attributes as information that may always, occasionally or never be revealed to the second communication device." Instead of specifically pointing out where this limitation is taught in the references, the Examiner essentially copied and pasted nearly the entire claim into the Final Office Action and then broadly cited to large swaths of Huberman (p. 80, "Community Discovery;" p. 81, "Private Preference Matching;" p. 85, "Cryptographic Details and Private Preference Matching."). Office Action, p. 11.

Appellants are unable to find any teaching in these portions of Huberman – or elsewhere – regarding a communication device that "designates a subset of the first plurality of attributes as information that may always, occasionally or never be revealed to the second communication device," as claimed. Drutman fails to satisfy Huberman's deficiencies. Thus, absent any teaching in either reference regarding this claim limitation, the rejection of the claims in this grouping should be reversed, and the claims in this grouping should be set for issue.

F. The Examiner Erred in Rejecting Claims 22-23 and 25 Using the Combination of Huberman, Drutman and Yeager.

1. Claims 22-23

Claims 22-23 stand rejected as allegedly obvious in view of Huberman, Drutman and Yeager. Appellants respectfully traverse this rejection. The grouping should not be construed to mean the patentability of any of the claims may be determined in later actions (*e.g.*, actions before a court) based on the

groupings. Rather, the presumption of 35 U.S.C. § 282 shall apply to each of these claims individually.

Claims 22 and 23 depend on claim 11. As explained above, claim 11 is patentable over the combination of Huberman and Drutman. Yeager fails to satisfy this combination's deficiencies. Thus, the Examiner erred in rejecting claims 22-23 using the combination of Huberman, Drutman and Yeager.

Based on the foregoing, the rejections against the claims in this grouping should be reversed and the claims set for issue.

2. Claim 25

Claim 25 stands rejected as allegedly obvious in view of Huberman, Drutman and Yeager. Appellants respectfully traverse this rejection. Claim 25 depends on claim 24. As explained above, claim 24 is patentable over the combination of Huberman and Drutman. Yeager fails to satisfy this combination's deficiencies. Thus, the Examiner erred in rejecting claim 25 using the combination of Huberman, Drutman and Yeager.

Based on the foregoing, the rejection against claim 25 should be reversed and claim 25 should be set for issue.

G. The Examiner Erred in Rejecting Claims 8, 9, 19 and 28 Using the Combination of Huberman, Drutman and Zacks.

1. Claim 8

Claim 8 requires "wherein enabling the communication device users to physically locate one another comprises providing identical images on the first and second communication devices." The Examiner admits that Huberman and Drutman fail to teach such a limitation and, thus, turns to Zacks. The Examiner asserts that Zacks' teaching at paragraph 50, combined with Huberman and Drutman, renders this limitation obvious.

Appellants traverse this rejection. This portion of Zacks appears to make no mention of providing "identical images." This portion of Zacks merely teaches that various communication forms can be used, including video still picture, text message, audio and/or icon or symbolic messaging, etc. This portion of Zacks then provides examples of such communication forms, none of which appears to

even resemble "identical images" displayed as part of an effort to enable communication device users to physically locate each other. Because the combination of these references fails to teach all of claim 8, the Examiner's rejection should be reversed.

2. Claim 9

Claim 9 requires "wherein enabling the communication device users to physically locate one another comprises emitting matching audible sounds via the first and second communication devices." The Examiner admits that Huberman and Drutman fail to teach such a limitation and, as a result, turns to Zacks. The Examiner asserts that this limitation is taught by Zacks at paragraph 50. However, as with claim 8 above, this portion of Zacks appears to make absolutely no mention of "matching audible sounds," and thus the combination of references certainly does not appear to teach or even suggest emitting matching audible sounds in an effort to enable users to physically locate each other. Because the combination of these references fails to teach all of claim 9, the Examiner's rejection should be reversed.

3. Claim 19

Claim 19 depends on independent claim 11. The rejection against claim 19 should be reversed at least because the rejection against claim 11 should be reversed.

4. Claim 28

Claim 28 requires "further comprising emitting an audible ring tone indicative of said total number of matches." The Examiner admits that Huberman and Drutman fail to teach this limitation. Instead, the Examiner asserts that paragraph 50 of Zacks, combined with Huberman and Drutman, teaches this limitation.

Appellants traverse this rejection. This portion of Zacks appears to make no mention of an audible ring tone, period. Even if it did (which it does not), the combination of references still does not teach an audible ring tone that is indicative of a total number of matches. Appellants respectfully point out that Zacks merely teaches that audio is one way in which communication device

users may communicate with each other. Combining such a teaching with Huberman and Drutman is a far cry from teaching an audible ring tone that indicates a total number of matches. If the Examiner intends to make an obviousness rejection against this claim, then the Examiner should at the very least find a reference that teaches audible ring tones and explain the motivation one of ordinary skill would have to make the ring tone indicate a total number of matches, all without using impermissible hindsight. The Examiner's present rejection does not even begin to come this far. Thus, the rejection against claim 28 should be reversed.

H. The Examiner Erred in Rejecting Claim 29 Using the Combination of Huberman, Drutman and Doub.

Claim 29 requires "wherein, if the first communication device is physically separated from the second communication device by a predetermined distance, the first communication device generates a message indicative of said separation." The Examiner admits that Huberman and Drutman fail to teach such a limitation. The Examiner instead asserts that Doub teaches this limitation at col. 3, ll. 43-61.

Respectfully, the Examiner is mistaken. This portion of Doub teaches that, upon receiving a signal, a device sends a reply signal only if the device is within range of the destination device. If the devices are within range of each other, a reply signal is sent. Otherwise, no reply signal is sent. This teaching fails to render claim 29 obvious because Doub's reply signal is **not** "indicative of said separation," as required by claim 29. Doub's reply signal is merely one that acknowledges receipt of the original signal. Because the reply signal is not indicative of separation between the devices, the Examiner's rejection of claim 29 should be reversed.

Based on the foregoing, Appellants respectfully submit that the rejections of the claims in this first grouping be reversed, and the claims set for issue.

I. Conclusion.

For the reasons stated above, Appellants respectfully submit that the Examiner erred in rejecting all pending claims. It is believed that no extensions

of time or fees are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Development Company's Deposit Account No. 08-2025.

Respectfully submitted,

/Nick P. Patel/

Nick P. Patel
PTO Reg. No. 57,365
CONLEY ROSE, P.C.
(713) 238-8000 (Phone)
(713) 238-8008 (Fax)
AGENT FOR APPELLANTS

HEWLETT-PACKARD COMPANY
Intellectual Property Administration
Legal Dept., M/S 35
P.O. Box 272400
Fort Collins, CO 80527-2400

VIII. CLAIMS APPENDIX

1. (Previously presented) A method usable on a first communication device adapted to communicate with a second communication device, comprising:

obtaining a first key;

encoding an attribute in the first communication device with the first key to produce a first encoded value;

transmitting the first encoded value to the second communication device;

receiving a second encoded value from the second communication device, the second encoded value comprising an attribute stored in the second communication device that has been encoded with a second key associated with the second communication device;

encoding the second encoded value with the first key to produce a third encoded value;

transmitting the third encoded value to the second communication device;

receiving a fourth encoded value from the second communication device, the fourth encoded value comprising the first encoded value after being encoded by the second key; and

if the third encoded value matches the fourth encoded value, adjusting a total number of matches; and

enabling users of the first and second communication devices to physically locate one another only if said total number of matches meets or exceeds a threshold;

wherein the first and second communication devices comprise mobile communication devices.

2. (Original) The method of claim 1, wherein obtaining a key comprises generating a random number.

3. (Original) The method of claim 1, wherein obtaining a key comprises reading a pre-programmed value from memory.

4. (Original) The method of claim 1, wherein encoding the attribute with the first key comprises calculating the attribute to the power of the first key to produce the first encoded value.

5. (Original) The method of claim 1, wherein the second encoded value comprises the attribute of the second device raised to the power of the second key and encoding the second encoded value with the first key comprises raising the second encoded value to the power of the first key.

6. (Original) The method of claim 1, further comprising transmitting the first communication device's attribute to the second communication device only after determining that the third encoded value matches the fourth encoded value.

7. (Canceled).

8. (Previously presented) The method of claim 1, wherein enabling the communication device users to physically locate one another comprises providing identical images on the first and second communication devices.

9. (Previously presented) The method of claim 1, wherein enabling the communication device users to physically locate one another comprises emitting matching audible sounds via the first and second communication devices.

10. (Previously presented) The method of claim 1, wherein enabling the communication device users to physically locate one another comprises providing each communication device with physical location information of the other communication device.

11. (Previously presented) A communication device, comprising:

a processor;

memory accessible to said processor and containing an attribute and software executable on said processor;

a communication interface coupled to said processor and adapted to permit the communication device to communicate with at least one other external device;

wherein, by executing said software, said processor determines whether the communication device's attribute matches an attribute stored in an external device, without receiving the attributes from the external device, based on a first encoded value received via the local communication interface from the external device, said first encoded value being indicative of an attribute stored in the external device;

wherein, if the communication device's attribute matches the attribute stored in the external device, the communication device adjusts a number of matches;

wherein, if the number of matches does not meet or exceed a threshold, the communication device refrains from disclosing a physical location of a user of the external device to a user of the communication device, unless a predetermined attribute of the communication device matches another attribute of the external device;

wherein the communication device comprises a mobile communication device.

12. (Original) The communication device of claim 11 wherein the processor encodes an attribute contained within the communication device with a key to produce a second encoded value that the processor causes to be transmitted through the communication interface to the external device.

13. (Original) The communication device of claim 11, wherein the first encoded value received from the external device comprises an attribute stored in the external device that has been encoded with a key unique to the external device.

14. (Original) The communication device of claim 11, further comprising a first key stored in said memory and unique to said communication device, wherein the processor encodes the first encoded value received from the external device with the first key to produce a third encoded value.

15. (Original) The communication device of claim 14, wherein the processor transmits the third encoded value to the external device.

16. (Original) The communication device of claim 14, wherein the processor receives a fourth encoded value from the external device, the fourth encoded value comprising an encoded version of a second encoded value using the key unique to the external device, the second encoded value produced by the processor encoding an attribute contained within the communication device.

17. (Original) The communication device of claim 16, wherein the processor determines whether the third encoded value matches the fourth encoded value.

18. (Original) The communication device of claim 12, wherein the key comprises a random number.

19. (Original) The communication device of claim 11, further comprising an antenna coupled to the processor, wherein the communication device is adapted to allow users of the communication and external devices to speak with one another via a service provider network.

20. (Original) The communication device of claim 11, wherein the processor transmits text messages to the external device via the local communication interface.

21. (Original) The communication device of claim 11, wherein the communication interface provides a direct, wireless communication with the external device.

22. (Original) The communication device of claim 21, wherein the communication interface implements Bluetooth.

23. (Original) The communication device of claim 11, wherein the communication device's attribute comprises an attribute selected from the group comprising contacts, phone numbers, keywords, interests, appointments and favorite restaurants.

24. (Previously presented) A system, comprising:

a first communication device having a first plurality of attributes and a first key;

a second communication device having a second plurality of attributes and a second key, the second communication device adapted to communicate with the first communication device;

wherein the first communication device encrypts each of the first plurality of attributes with a first key to form a first plurality of encrypted values and the second communication device encrypts each of the second plurality of attributes with a second key to form a second plurality of encrypted values;

wherein the first communication device transmits each first encrypted value to the second communication device and the second communication device transmits each second encrypted value to the first communication device;

wherein the first communication device encrypts each second encrypted value with the first key to produce a third plurality of encrypted values, and the second communication device encrypts each first encrypted value with the second key to produce a fourth plurality of encrypted values;

wherein the first communication device transmits each third encrypted value to the second communication device, and the second communication device transmits each fourth encrypted value to the first communication device; and

wherein, if one of the first or second communication devices determines that any third encoded value matches any fourth encoded value, said one of the first or second communication devices enables a user of that communication device to physically locate a user of the other communication device;

wherein the first communication device comprises a mobile communication device;

wherein the first communication device designates a subset of the first plurality of attributes as information that may always, occasionally or never be revealed to the second communication device.

25. (Original) The system of claim 24, wherein each of the first communication device and the second communication device implement a discovery mode wherein each communication device monitors for the presence of another communication device.

26. (Canceled).

27. (Original) The system of claim 24, wherein the first key is distinct from the second key.

28. (Previously presented) The method of claim 1 further comprising emitting an audible ring tone indicative of said total number of matches.

29. (Previously presented) The system of claim 24, wherein, if the first communication device is physically separated from the second communication device by a predetermined distance, the first communication device generates a message indicative of said separation.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.